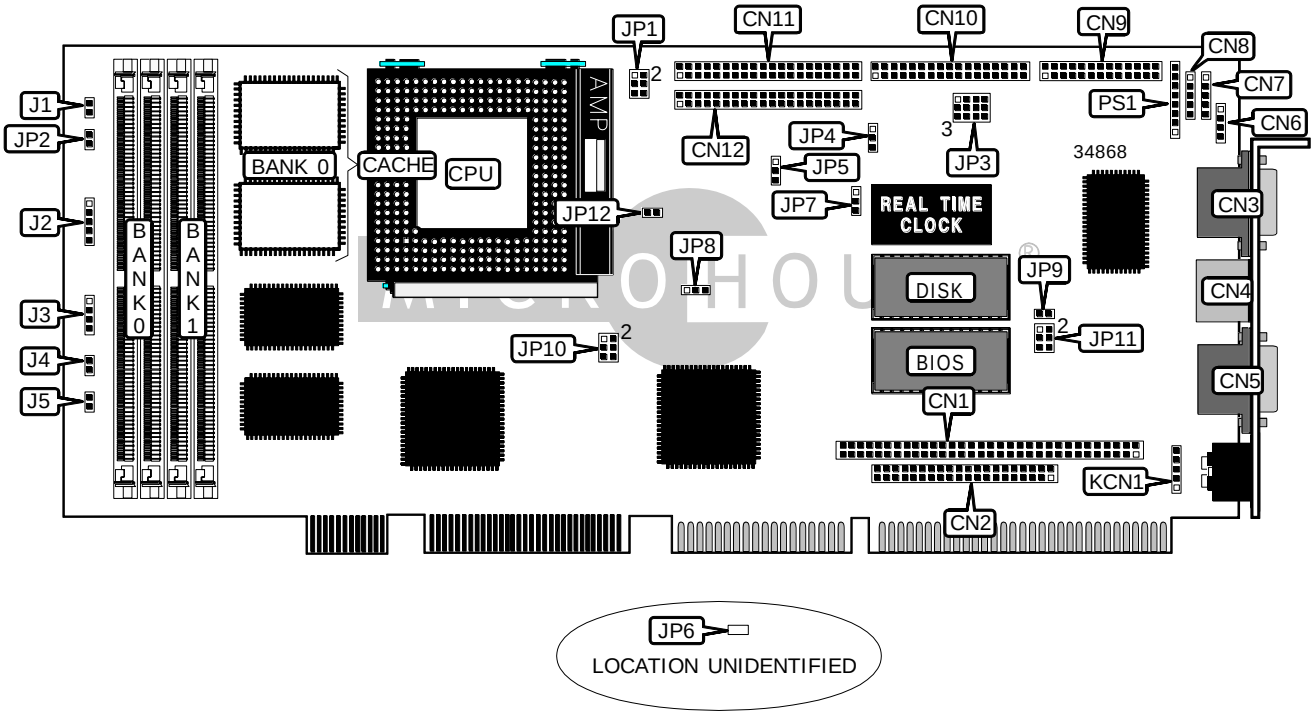
# LANNER ELECTRONICS, INC.
# A P - 5 0 0

| | |
|---|---|
| **Device Type** | Mainboard |
| **Processor** | CX 6X86/CX M2/AM K5/AM K6/Pentium |
| **Processor Speed** | 75/90/100/120/133/150/166/180/200MHz |
| **Chip Set** | Intel |
| **Video Chip Set** | None |
| **Maximum Onboard Memory** | 128MB (EDO & SDRAM supported) |
| **Maximum Video Memory** | None |
| **Cache** | 512KB |
| **BIOS** | Award |
| **Dimensions** | 338mm x 122mm |
| **I/O Options** | Floppy drive interface, green PC connector, IDE interfaces (2), parallel port, PS/2 mouse port, serial ports (2), IR connector, USB connectors (2) |
| **NPU Options** | None |

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| CONNECTIONS | | | |
|---|---|---|---|
| **Purpose** | **Location** | **Purpose** | **Location** |
| PC/104 connector | CN1 | IDE interface 1 | CN11 |
| PC/104 connector | CN2 | IDE interface 2 | CN12 |
| Serial port 1 | CN3 | IDE interface LED | J1 |
| PS/2 mouse port | CN4 | Power LED & keylock | J2 |
| Serial port 2 | CN5 | Speaker | J3 |
| IR connector | CN6 | Turbo LED | J4 |
| USB connector 2 | CN7 | Reset switch | J5 |
| USB connector 1 | CN8 | Green PC connector | JP2 |
| Parallel port | CN9 | Auxiliary keyboard connector | KCN1 |
| Floppy drive interface | CN10 | Power connector | PS1 |

| USER CONFIGURABLE SETTINGS | | |
|---|---|---|
| **Function** | **Label** | **Position** |
| í Factory configured - do not alter | JP6 | Open |
| í PS/2 mouse IRQ12 enabled | JP9 | Closed |
| PS/2 mouse IRQ12 disabled | JP9 | Open |

| DRAM CONFIGURATION | | |
|---|---|---|
| **Size** | **Bank 0** | **Bank 1** |
| 8MB | (2) 1M x 36 | None |
| 16MB | (2) 2M x 36 | None |
| 16MB | (2) 1M x 36 | (2) 1M x 36 |
| 24MB | (2) 2M x 36 | (2) 1M x 36 |
| 32MB | (2) 4M x 36 | None |
| 32MB | (2) 2M x 36 | (2) 2M x 36 |
| 40MB | (2) 4M x 36 | (2) 1M x 36 |
| 48MB | (2) 4M x 36 | (2) 2M x 36 |
| 64MB | (2) 8M x 36 | None |
| 64MB | (2) 4M x 36 | (2) 4M x 36 |
| 72MB | (2) 8M x 36 | (2) 1M x 36 |
| 80MB | (2) 8M x 36 | (2) 2M x 36 |
| 96MB | (2) 8M x 36 | (2) 4M x 36 |
| 128MB | (2) 8M x 36 | (2) 8M x 36 |
| Note: Board accepts EDO memory. | | |

| CACHE CONFIGURATION | |
|---|---|
| **Size** | **Bank 0** |
| 512KB | (2) 64K x 32 |

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| CPU SPEED SELECTION (CX 6X86) | | | | |
|---|---|---|---|---|
| **CPU speed** | **Clock speed** | **Multiplier** | **JP1** | **JP10** |
| 120MHz | 50MHz | 2x | 1 & 2 | 1 & 2, 3 & 4 |
| 133MHz | 55MHz | 2x | 1 & 2 | Open |
| 150MHz | 60MHz | 2x | 1 & 2 | 1 & 2 |
| 166MHz | 66MHz | 2x | 1 & 2 | 3 & 4 |
| Note: Pins designated should be in the closed position. | | | | |

| CPU SPEED SELECTION (CX M2) | | | | |
|---|---|---|---|---|
| **CPU speed** | **Clock speed** | **Multiplier** | **JP1** | **JP10** |
| 166MHz | 66MHz | 2x | 1 & 2 | 3 & 4 |
| 200MHz | 66MHz | 3x | 3 & 4 | 3 & 4 |
| Note: Pins designated should be in the closed position. | | | | |

| CPU SPEED SELECTION (AM K5) | | | | |
|---|---|---|---|---|
| **CPU speed** | **Clock speed** | **Multiplier** | **JP1** | **JP10** |
| 75MHz | 50MHz | 1.5x | Open | 1 & 2, 3 & 4 |
| 90MHz | 60MHz | 1.5x | Open | 1 & 2 |
| 100MHz | 66MHz | 1.5x | Open | 3 & 4 |
| 120MHz | 60MHz | 2x | 1 & 2 | 1 & 2 |
| 133MHz | 66MHz | 2x | 1 & 2 | 3 & 4 |
| 150MHz | 60MHz | 2.5x | 1 & 2, 3 & 4 | 1 & 2 |
| 166MHz | 66MHz | 2.5x | 1 & 2, 3 & 4 | 3 & 4 |
| 180MHz | 60MHz | 3x | 3 & 4 | 1 & 2 |
| 200MHz | 66MHz | 3x | 3 & 4 | 3 & 4 |
| Note: Pins designated should be in the closed position. | | | | |

| CPU SPEED SELECTION (AM K6) | | | | |
|---|---|---|---|---|
| **CPU speed** | **Clock speed** | **Multiplier** | **JP1** | **JP10** |
| 166MHz | 66MHz | 2.5x | 1 & 2, 3 & 4 | 3 & 4 |
| 200MHz | 66MHz | 3x | 3 & 4 | 3 & 4 |
| Note: Pins designated should be in the closed position. | | | | |

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| CPU SPEED SELECTION (INTEL) | | | | |
|---|---|---|---|---|
| **CPU speed** | **Clock speed** | **Multiplier** | **JP1** | **JP10** |
| 75MHz | 50MHz | 1.5x | Open | 1 & 2, 3 & 4 |
| 90MHz | 60MHz | 1.5x | Open | 1 & 2 |
| 100MHz | 66MHz | 1.5x | Open | 3 & 4 |
| 120MHz | 60MHz | 2x | 1 & 2 | 1 & 2 |
| 133MHz | 66MHz | 2x | 1 & 2 | 3 & 4 |
| 150MHz | 60MHz | 2.5x | 1 & 2, 3 & 4 | 1 & 2 |
| 166MHz | 66MHz | 2.5x | 1 & 2, 3 & 4 | 3 & 4 |
| 180MHz | 60MHz | 3x | 3 & 4 | 1 & 2 |
| 200MHz | 66MHz | 3x | 3 & 4 | 3 & 4 |
| Note: Pins designated should be in the closed position. | | | | |

| CPU SPEED SELECTION (INTEL MMX) | | | | |
|---|---|---|---|---|
| **CPU speed** | **Clock speed** | **Multiplier** | **JP1** | **JP10** |
| 166MHz | 66MHz | 2.5x | 1 & 2, 3 & 4 | 3 & 4 |
| 200MHz | 66MHz | 3x | 3 & 4 | 3 & 4 |
| Note: Pins designated should be in the closed position. | | | | |

| CPU VOLTAGE SELECTION (SINGLE) | |
|---|---|
| **Voltage** | **JP5** |
| í 3.3v | Pins 1 & 2 closed |
| 3.52v | Pins 2 & 3 closed |

| CPU VOLTAGE SELECTION (DUAL) | |
|---|---|
| **Voltage** | **JP8** |
| í 2.8v | Pins 1 & 2 closed |
| 3.3v | Pins 2 & 3 closed |

| CPU VOLTAGE SELECTION (AUTO DETECT) | |
|---|---|
| **Setting** | **JP7** |
| í Auto detect | Pins 1 & 2 closed |
| Reduce Q3 temperature | Pins 2 & 3 closed |

| CPU VOLTAGE SELECTION | | | |
|---|---|---|---|
| **Voltage** | **JP7** | **JP8** | **JP12** |
| 3.3v | Pins 2 & 3 closed | Pins 2 & 3 closed | Open |
| 3.52v | Pins 2 & 3 closed | Open | Closed |
| Note: Use this setting only if Q3 temperature needs to be reduced. Single voltage only. If an MMX CPU is installed, jumpers JP5, JP7 & JP8 must be set to the default setting. | | | |

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| WATCHDOG TIMER ACTIVE SELECTION | |
|---|---|
| **Time out** | **JP3** |
| .5 sec | Pins 2 & 3 closed |
| 1 sec | Pins 5 & 6 closed |
| 2 sec | Pins 8 & 9 closed |
| í 4 sec | Pins 11 & 12 closed |
| 8 sec | Pins 10 & 11 closed |
| 16 sec | Pins 7 & 8 closed |
| 32 sec | Pins 4 & 5 closed |
| 64 sec | Pins 1 & 2 closed |

| WATCHDOG TIMER ACTIVE SELECTION | |
|---|---|
| **Setting** | **JP4** |
| í Reset system | Pins 1 & 2 closed |
| NMI system | Pins 2 & 3 closed |
| Disabled | Open |

| ROM DISK ADDRESS SELECTION | |
|---|---|
| **Setting** | **JP11** |
| C8000 | Pins 1 & 2 closed |
| D0000 | Pins 3 & 4 closed |
| D8000 | Pins 5 & 6 closed |